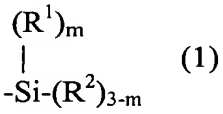
What is claimed is:

1. A polyvinyl alcohol obtained by hydrolysis of a polyvinyl ester comprising polymerized silyl group functionalized monomer units of formula (1):



(1)

wherein R^1 represents an alkyl group having from 1 to 5 carbon atoms; R^2 represents an alkoxyl or acyloxyl group; and m is an integer of from 0 to 2,

which satisfies the following formulae (I) and (II):

$$20 < P \times S < 370 \qquad \text{(I)}$$

wherein P is the viscosity-average degree of polymerization of the polyvinyl alcohol; and S is the content (mol%) of the silyl group functionalized monomer units of formula (1) in the polyvinyl alcohol,

$$0.1/100 \leq (A - B)/(B) \leq 50/100 \qquad \text{(II)}$$

wherein A is the silicon atom content of the polyvinyl alcohol in ppm; B is the silicon atom content of the polyvinyl alcohol in ppm after the polyvinyl alcohol has been first washed with a sodium hydroxide-containing methanol solution and then washed by Soxhlet extraction with methanol; and A and B are measured by ICP emission spectrometry of an ashed sample of the polyvinyl alcohol, and

wherein an aqueous 4 % solution of the polyvinyl alcohol has a pH of from 4 to 8.

2. The polyvinyl alcohol as claimed in claim 1, which satisfies the following formulae (III) and (IV):

$$200 < P < 3790 \times (0.2Y - 1.40 + 2.87/Y) \qquad \text{(III)}$$

$$1.4 \leq Y \leq 3.0 \qquad \text{(IV)}$$

wherein P is the viscosity-average degree of polymerization of the polyvinyl alcohol; and Y is the 1,2-glycol bond content of the polyvinyl alcohol in mol%.

3. A coating agent that contains the polyvinyl alcohol of claim 1.

4. A coated article produced by applying the coating agent of claim 3 to a substrate.

5. An inkjet recording material produced by applying the coating agent of claim 3 to a substrate.

6. A thermal recording material produced by applying the coating agent of claim 3 to a substrate.

7. The polyvinyl alcohol as claimed in claim 1, wherein R^2 is an alkoxyl or acyloxyl group having an oxygen-containing substituent.

8. The polyvinyl alcohol as claimed in claim 1, wherein
$40 < P \times S < 360$.

9. The polyvinyl alcohol as claimed in claim 1, wherein
$80 < P \times S < 350$.

10. The polyvinyl alcohol as claimed in claim 1, wherein
$0.3/100 \leq (A-B)/(B) \leq 25/100$.

11. The polyvinyl alcohol as claimed in claim 1, wherein
$0.4/100 \leq (A-B)/(B) \leq 20/100$.

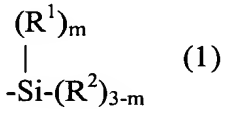
12. The polyvinyl alcohol as claimed in claim 1 having a degree of hydrolysis of at least 98 mol%.

13. The polyvinyl alcohol as claimed in claim 1, wherein the hydrolyzed silyl group functionalized monomer units are present in an amount of from 0.05 to 1.0 mol%.

14. The polyvinyl alcohol as claimed in claim 1, wherein the hydrolyzed silyl group functionalized monomer units are present in an amount of from 0.2 to 0.5 mol%.

15. A method for producing the polyvinyl alcohol of claim 1, which comprises:

copolymerizing a vinyl ester monomer with a monomer having a silyl group of formula (1) to form a polyvinyl ester:

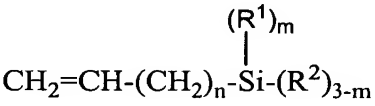


(1)

wherein R^1 represents an alkyl group having from 1 to 5 carbon atoms; R^2 represents an alkoxyl or acyloxyl group; and m is an integer of from 0 to 2,

and then hydrolyzing the polyvinyl ester.

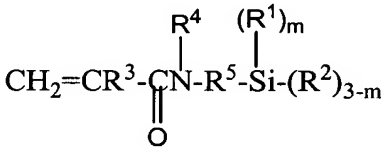
16. The method as claimed in claim 15, wherein the monomer is represented by formula (2):



(2)

wherein R^1 represents an alkyl group having from 1 to 5 carbon atoms; R^2 represents an alkoxyl or acyloxyl group; m indicates an integer of from 0 to 2; and n is an integer of from 0 to 4,

or by formula (3):



(3)

wherein R^1 represents an alkyl group having from 1 to 5 carbon atoms; R^2 represents an alkoxyl or acyloxyl group; R^3 represents a hydrogen atom or a methyl group; R^4 represents a hydrogen atom, or an alkyl group having from 1 to 5 carbon atoms; R^5 represents an alkylene group having from 1 to 5 carbon atoms, or a divalent hydrocarbon group that contains an oxygen or nitrogen atom; and m is an integer of from 0 to 2.

17. The method as claimed in claim 15, wherein R^2 is an alkoxyl or acyloxyl group having an oxygen-containing substituent.

18. The method as claimed in claim 15, wherein the vinyl ester monomer is vinyl acetate and the monomer having a silyl group of formula (1) is vinyl trimethoxy silane.